5 WHAT IS CLAIMED IS:

- 1. A method for analyzing one or a plurality of digital images using a plurality of software agents, comprising:
 - A program for initializing and assigning a plurality of agents to at least one of said images;
 - Means for said agents to perceive at least one of said images at one or a plurality of scale representations; and
 - Means for said agents to modify pixel values of said images.
- 2. The method as claimed in claim 1, wherein each said agents further comprise:
- Sensors to locally sense information comprised in said images;
 - Decision making means for allowing said agents to take action in accordance to specific mental states;
 - Processing means for processing said information perceived by said sensors.
- 3. The method as claimed in claim 1, wherein said step of assigning further comprises the steps of:
 - Preprocessing at least one of said images;
 - Producing spatial coordinates from results of said step of preprocessing;
 - Assigning said agents according to said spatial coordinates.
- 4. The method as claimed in claim 2, wherein said agents have the capability to further adapt said sensors by changing configuration of said sensors.
- 5. The method as claimed in claim 4, wherein said step of changing configuration of said sensors comprises at least changing size of said sensors.
- The method as claimed in anyone of claims 4 and 5, wherein said step of changing configuration of said sensors comprises changing resolution of said sensors.
- 7. The method as claimed in claim 1, wherein said means to perceive comprises:
- Analyzing said images at a first scale representation by means of at least one of said agents;
 - Analyzing said images at a second scale representation by means of at least one other of said agents; and
 - Exchanging information between said agents at said first and second scale representations.

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8. The method as claimed in claim 7, wherein said step of exchanging information further allows for at least one of said agents to adapt itself.

- 9. The method as claimed in claim 1, wherein said scale is a spatial scale.
- 10. The method as claimed in claim 1, wherein said scale is a semantic scale.
- 11. The method as claimed in any one of claims 2, 4, 5,6, wherein said sensors provide a spatial multiscale representation of said image, wherein said multiscale representation simultaneously provides said agents with image information at every considered spatial scale.
- 12. The method as claimed in claim 11, wherein said multiscale information provides a multiscale signature and wherein said signature further allows said agent to classify said information.
- 13. The method as claimed in claim 12, wherein said step of classifying information is achieved by means artificial neural networks.
- 14. A method for contour recognition in one or a plurality of digital images by means of one or a plurality of software agents, comprising the steps of:
 - Initializing and assigning at least one of said agents to an image, said agents comprising at least one sensor;
 - Said agents recognizing said contours in said image by means of said sensors; and
 - Said agents drawing said recognized contours in said image.

15. An apparatus for analyzing one or a plurality of digital images, comprising:

Image data input means;

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- At least one processing node, said processing node comprising memory and processing unit;
- A method for analyzing said images, said method as claimed in claim 1;
- Display means for displaying said images.